MONTHLY REPORT

[redacted]

25X1

PAR 211

3 April 64

SUBJECT: Microdensitometer Study of Effects of Processing

TASK/PROBLEM

1. Collect and study microdensitometric data from mission materials in an attempt to determine the effect of film emulsions, processing, and printing on the characteristics of image edges. Also, attempt to determine true location of image edges for mensuration purposes.

DISCUSSION

2. Acutance Measurements: An acutance exposing technique was developed in which a glass plate with a high resolution sharp edge exposure crossed with a step table is contact printed on the film sample. This produces a series of edges varying in contrast. Microdensitometer traces of these edges are converted to acutance values by data reduction in an IBM 1620 computer. Testing of the technique is proceeding, using Type 4404 film.

3. Modulation Transfer Measurements: Modulation transfer function exposures were made on Type SO-105 (very high definition)film to calibrate the Microdensitometer camera. Approximately 30 strips were exposed and scanned on the microdensitometer, and reduction of the data accomplished by a graphical technique. Considerable scattering of data points led to a statistical study of plotting errors. An IBM 1620 program was prepared which will speed data reduction and remove some errors found in graphical data reduction method.

PLANNED ACTIVITIES

4. Problems associated with the techniques of measuring acutance and modulation transfer will be solved in the next 30 days and the investigation of processing effect will proceed.